WHAT IS CLAIMED IS:

1. A method of investment casting bulk solidifying amorphous alloys comprising:

providing an investment mold having at least one cavity;

providing a feedstock of bulk solidifying amorphous alloy;

heating the feedstock of the bulk solidifying amorphous alloy to a temperature above the melting temperature of the bulk solidifying amorphous alloy to form a molten bulk solidifying amorphous alloy;

introducing a sufficient quantity of the molten bulk solidifying amorphous alloy into the cavity of the investment mold to fill the cavity of the investment mold with molten bulk solidifying amorphous alloy;

quenching the filled investment mold in a quenching medium to form a cast component of the bulk solidifying amorphous alloy; and

separating the investment mold from the cast component.

2. The method described in claim 1, wherein the bulk solidifying amorphous alloy has a ΔTsc of more than 60 °C.

3. The method described in claim 1, wherein the bulk solidifying amorphous alloy has a ΔTsc of more than 90 °C.

4. The method described in claim 1, wherein quenching comprises keeping filled investment mold in contact with the quenching medium until the entirety of the cast component is cooled to below the glass transition temperature of the bulk solidifying amorphous alloy.

5. The method described in claim 1, wherein the investment mold is separated from the cast component after the temperature at an outer portion of the cast component is reduced below the glass transition temperature of the bulk solidifying amorphous alloy.

6. The method described in claim 1, wherein the thickness of the investment mold is less than 3.0 mm.

7. The method described in claim 1, wherein the investment mold is heated to a temperature no greater than the glass transition temperature of the bulk solidifying amorphous alloy.

8. The method described in claim 1, wherein heating the feedstock includes superheating the feedstock to a temperature about 100 °C above the melting temperature of the bulk-solidifying amorphous alloy.

9. The method described in claim 1, wherein the heating of the feedstock is carried out under one of either an inert atmosphere or vacuum.

10. The method described in claim 1, wherein the bulk-solidifying amorphous alloy has a critical cooling rate of less than about 50 °C/sec.

11. The method described in claim 1, wherein the bulk-solidifying amorphous alloy has a critical cooling rate of less than about 5 °C/sec.

12. The method described in claim 1, wherein the bulk-solidifying amorphous alloy has a single crystallization step.

13. The method described in claim 1, wherein the bulk-solidifying amorphous alloy has at least two crystallization steps, each crystallization step being defined by a temperature range (ΔT_n) over which the crystallization step occurs and an enthalpy (ΔH_n) defining the difference in heat flow during the crystallization step, and wherein the enthalpy of the first crystallization step (ΔH_1) is larger that the enthalpies of the subsequent crystallization steps.

14. The method described in claim 13, wherein the bulk-solidifying amorphous alloy has a sharpness ratio for each crystallization step defined by the equation $\Delta H_n/\Delta T_n$, and wherein the sharpness ratio of the first crystallization step ($\Delta H_1/\Delta T_1$) is larger than the sharpness ratios of the subsequent crystallization steps.

15. The method described in claim 13, wherein the bulk-solidifying amorphous alloy has a sharpness ratio for each crystallization step defined by the equation $\Delta H_n/\Delta T_n$, and wherein the sharpness ratio of the first crystallization step ($\Delta H_1/\Delta T_1$) is at least twice as large as the sharpness ratio of the subsequent crystallization step.

16. The method described in claim 13, wherein the bulk-solidifying amorphous alloy has a sharpness ratio for each crystallization step defined by the equation $\Delta H_n/\Delta T_n$, and wherein the sharpness ratio of the first

crystallization step ($\Delta H_1/\Delta T_1$) is at least four times as large as the sharpness ratio of the subsequent crystallization step.

17. The method described in claim 1, wherein introducing the molten bulk-solidifying amorphous alloy is carried out under vacuum.

18. The method described in claim 1, wherein introducing the molten bulk-solidifying amorphous alloy comprises a process selected from the group consisting of gravity feeding, centrifugal forcing, vacuum suction/assist, external pressure application, and counter-gravity casting.

19. A bulk-solidifying amorphous alloy article formed according to the method comprising:

providing an investment mold having at least one cavity;

providing a feedstock of bulk solidifying amorphous alloy;

heating the feedstock of the bulk solidifying amorphous alloy to a temperature above the melting temperature of the bulk solidifying amorphous alloy to form a molten bulk solidifying amorphous alloy;

introducing a sufficient quantity of the molten bulk solidifying amorphous alloy into the cavity of the investment mold to fill the cavity of the investment mold with molten bulk solidifying amorphous alloy;

quenching the filled investment mold in a quenching medium to form a cast article of the bulk solidifying amorphous alloy; and

separating the investment mold from the cast article.

20. The article described in claim 19, wherein the article has a defining ratio of more than 10.

21. The article described in claim 19, wherein the article has an elastic strain limit of at least 1.5 %.

22. The article described in claim 19, wherein the article has a defining ratio of more than 10 and an outer dimension less than about 30 mm.